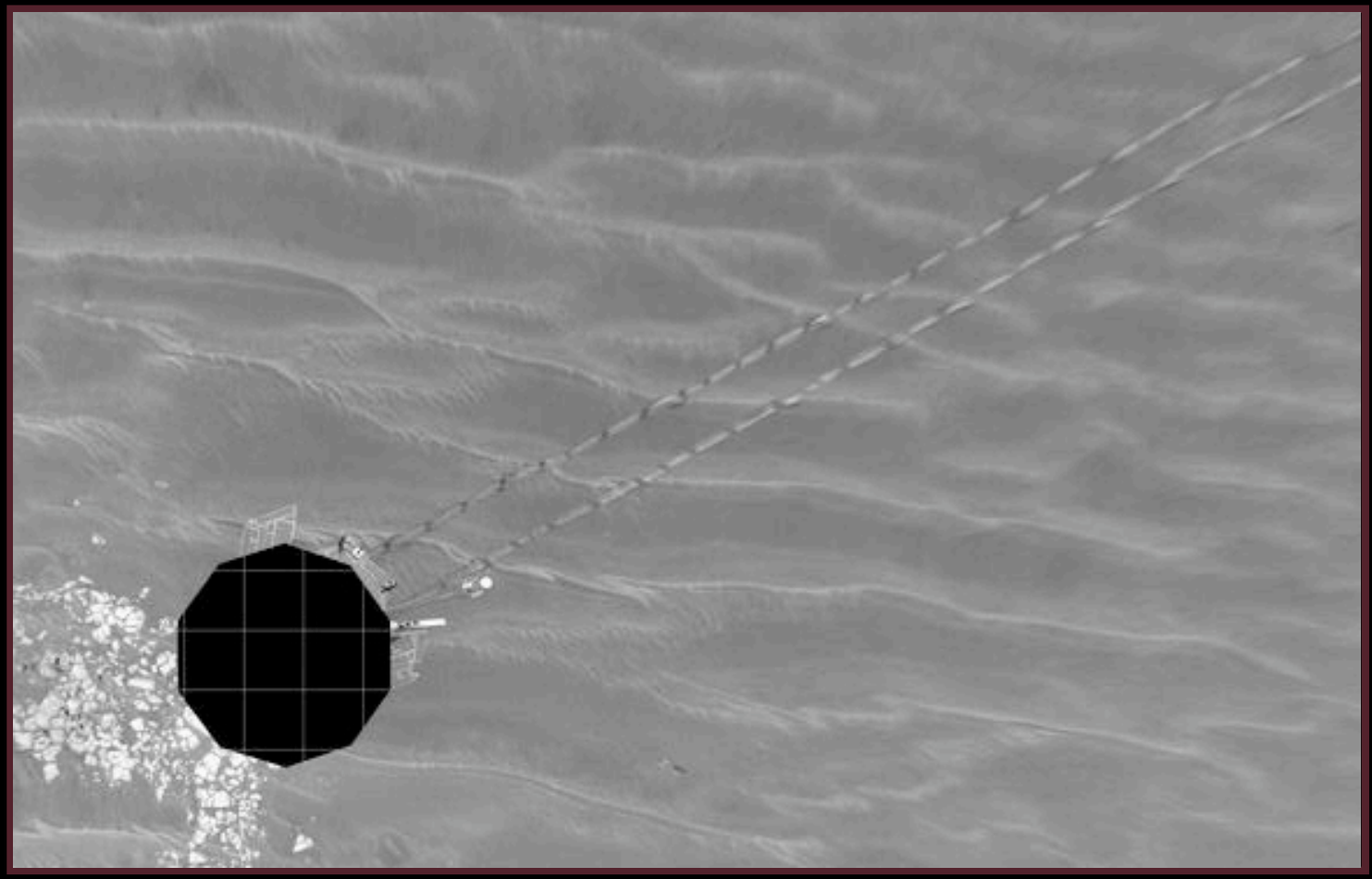
Mars Exploration Rover Mission

Spirit and Opportunity

Month in Review
March 1, 2005 - March 31, 2005

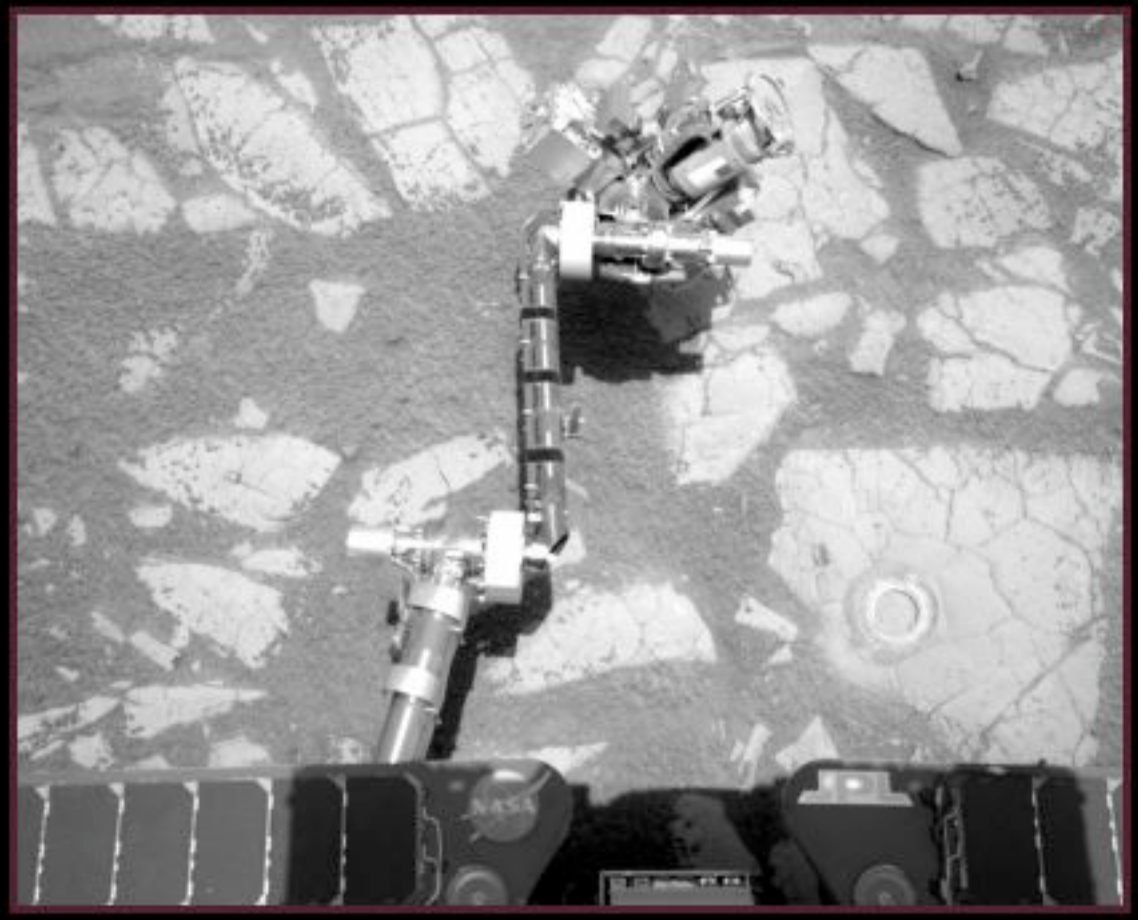
Rover tracks lead to a crater called "Vostok," which Opportunity reached on March 8, 2005.



Navigation camera images combined into a 360-degree view, sol 399.

The black circular grid reflects an area where navigation camera images were not acquired.

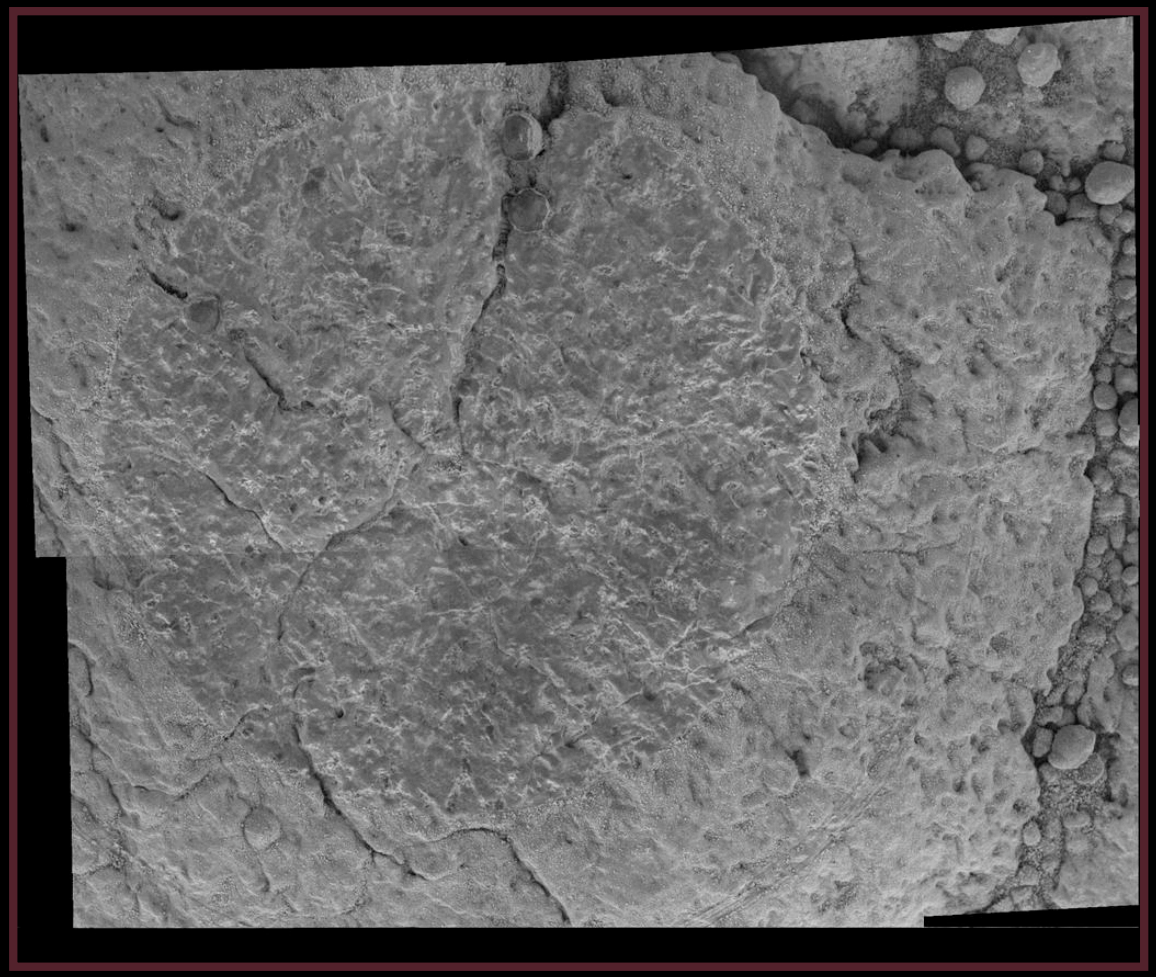
Along the way to Vostok, Opportunity's mineral-finding Mini-TES instrument sent back a few incomplete data sets.



Navigation camera, March 15, 2005 (sol 405).

While troubleshooting continued, scientists focused on using instruments on the rover's robotic arm.

Otherwise, Opportunity is in excellent health and continued studying the rock "Yuri," at a target for up-close examination named "Gagarin."



Microscopic imager mosaic of "Gagarin" target.

The team chose these names to honor Yuri Gagarin, the Russian cosmonaut who was the first human in space.

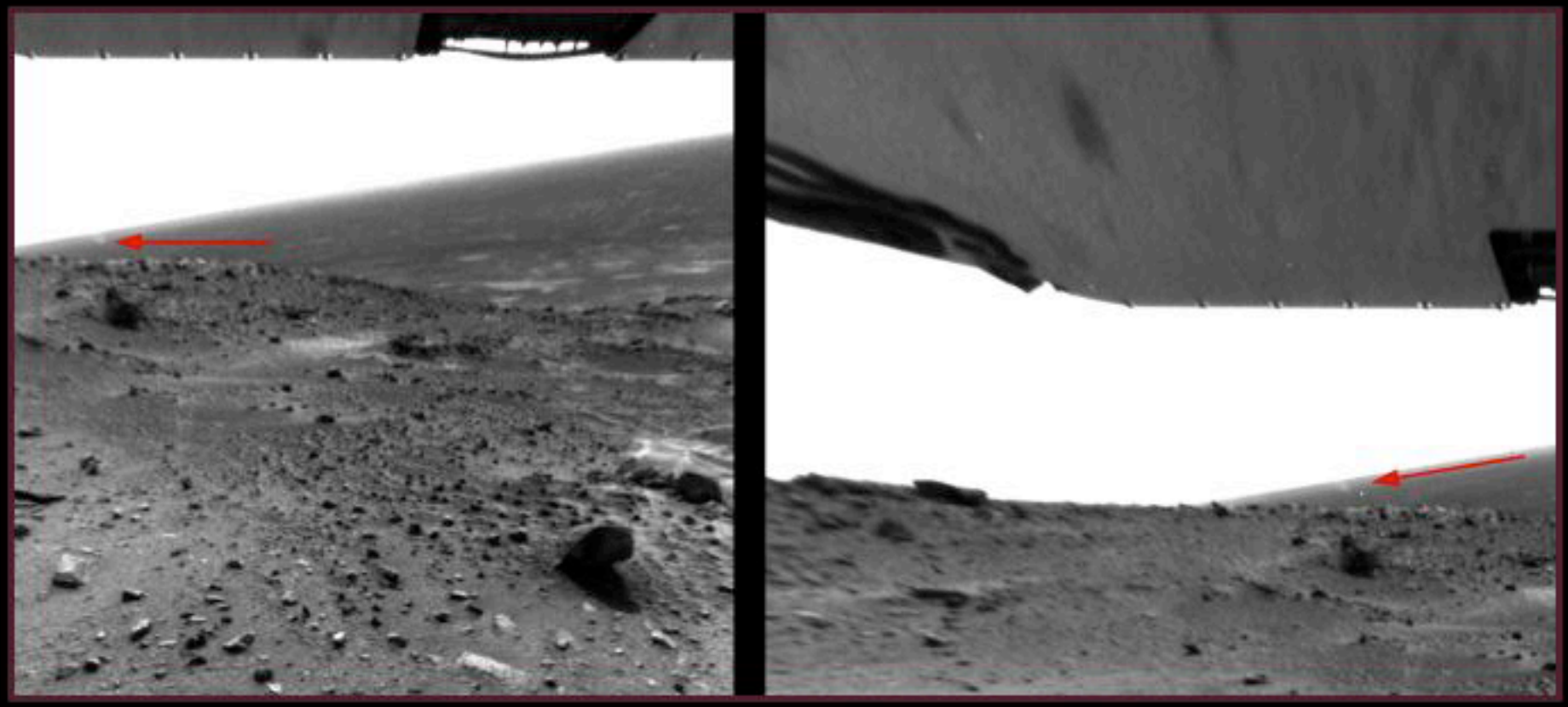
On March 18, Opportunity broke the martian-one-day-driving record, traveling 623 feet (190 meters) in a single sol!

Rear hazard-avoidance camera, sol 410 (March 20, 2005).

On March 20, Opportunity broke the record again, traveling 722 feet (220 meters)!

Navigation camera image, sol 411 (March 21, 2005).

On the other side of the planet, Spirit revealed martian winds kicking up some dust devils.



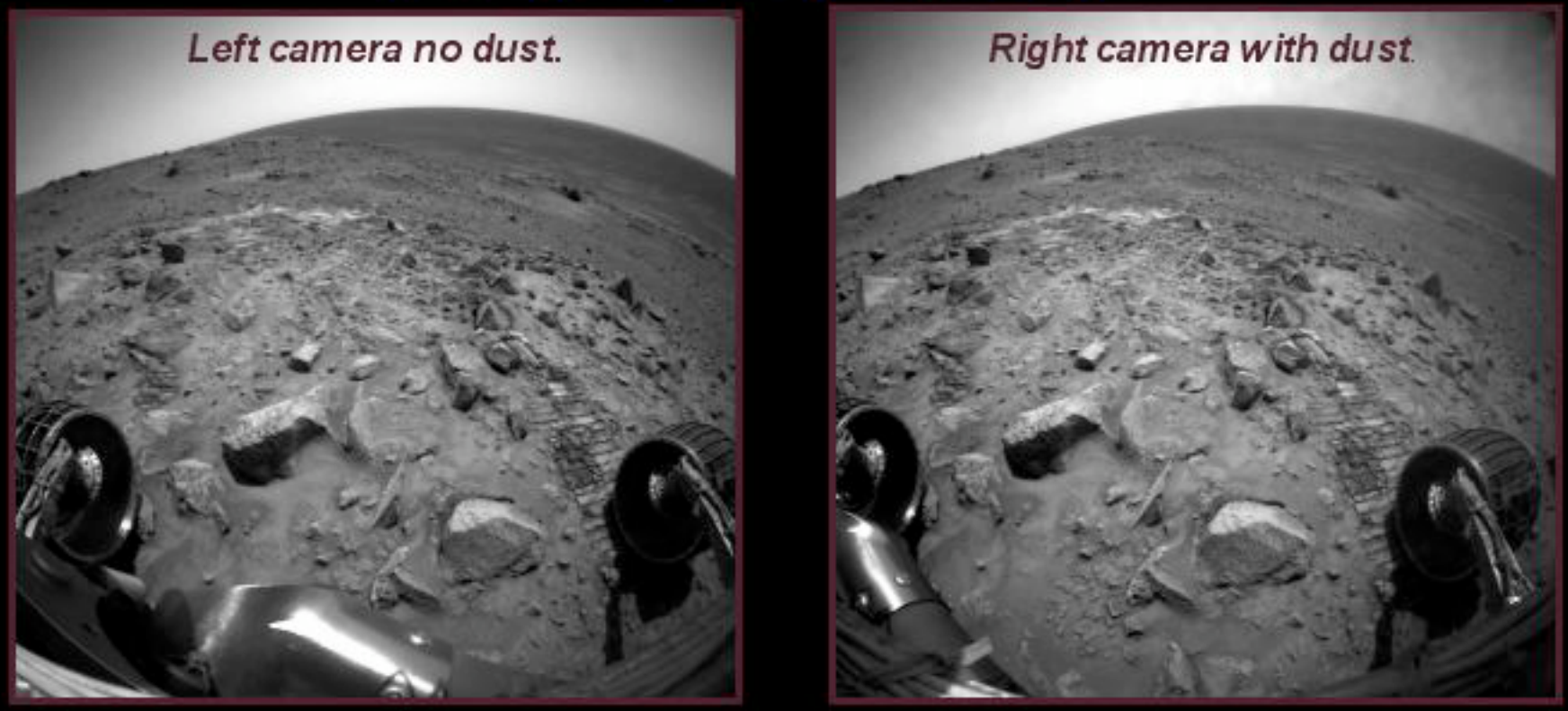
Rear hazard-avoidance camera images, sol 421 (March 10, 2005).

Scientists estimate that these whirling dust clouds moved at a rate of 7 mph.

The winds deposited dust on Spirit's cameras that are close to the surface of Mars.

Front hazard-avoidance camera, March 6, 2005 (sol 417).

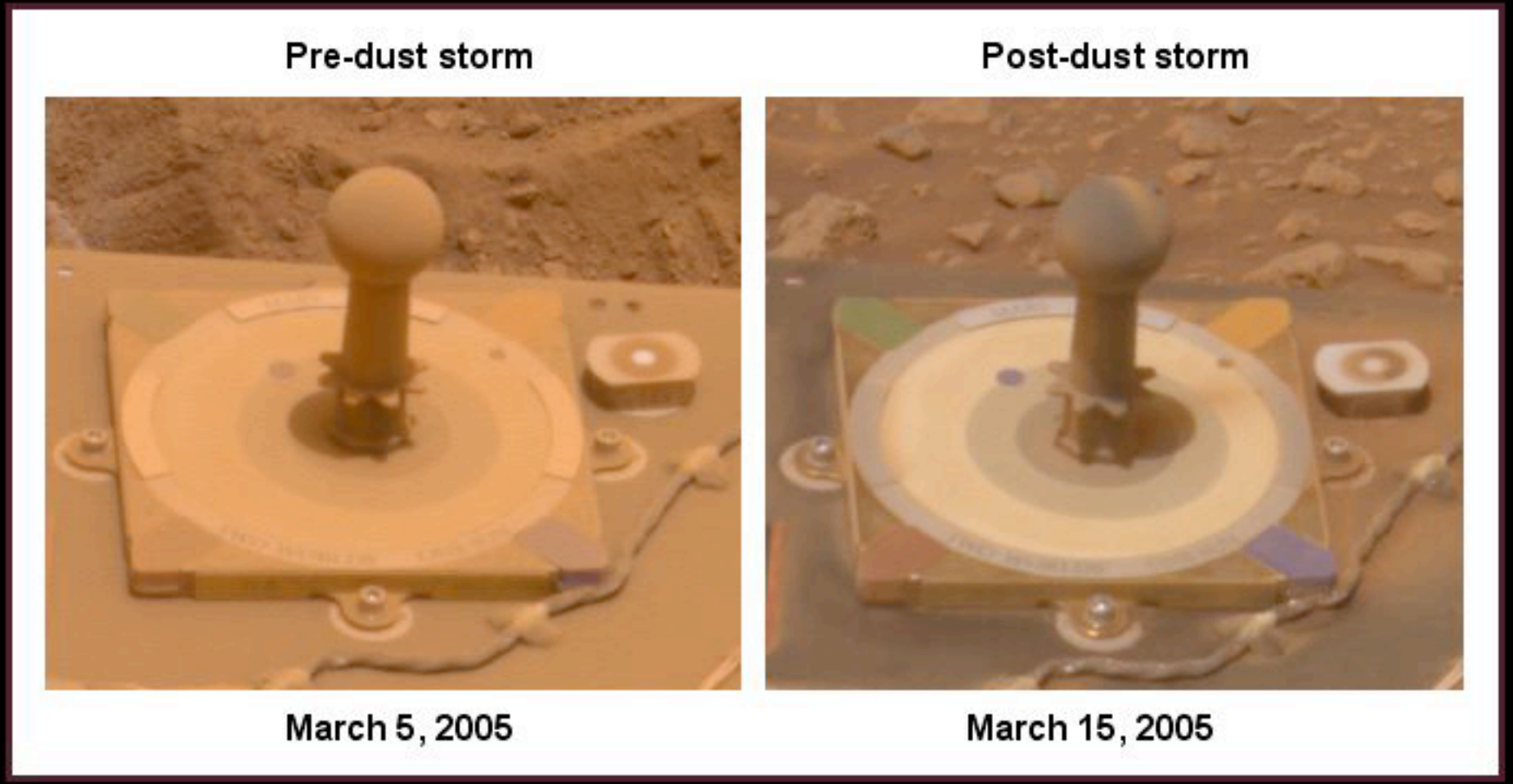
By March 9, 2005 Opportunity's left lower camera appeared to be mostly cleaned off, perhaps by additional wind.



Front hazard-avoidance camera images, sol 433 (March 22, 2005).

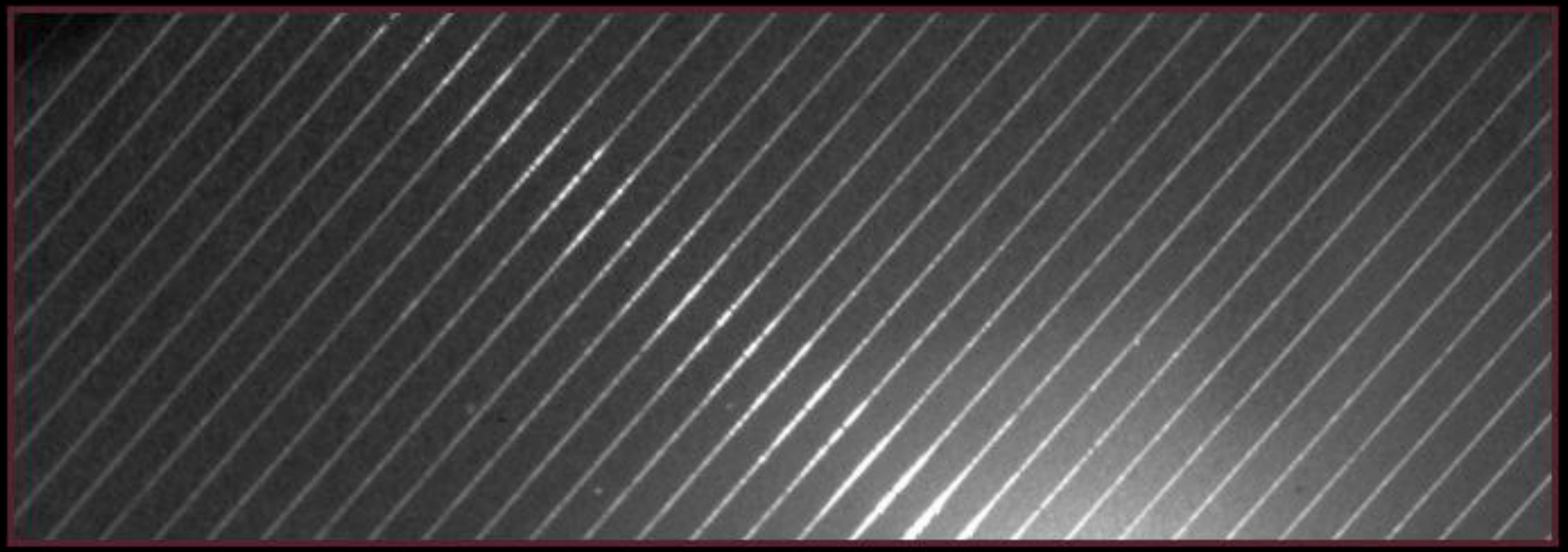
The right lower camera still has some dust on the lens, but no problems are caused by this addition.

Great news is that the high winds *removed* dust from Spirit's solar panels, causing the rover's daily power supply to double!



Approximate "true color" panoramic camera images of the calibration target on Spirit.

Clean and shiny solar panels mean more energy for Spirit, inspiring the team to ramp up science operations and move toward the summit of Husband Hill.



Microscopic imager, March 20, 2005

Opportunity will investigate one of the sand ripples nearby.